What is the best plan?

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Clock-Proxy Auction

- Clock phase for price discovery
  - FCC states prices; bidders state quantities
  - Prices ascend according to excess demand
  - Stops when no excess demand on any product
- Final proxy round for adjustments
  - Final fitting of demands with complements
  - No demand reduction with large buyers

Advantages of Clock-Proxy Auction

- Clock
  - Take linear prices as far as they will go
  - Simplicity and flexibility for bidders and FCC
  - Expand substitution possibilities
  - Minimize scope for collusion
  - No exposure problem; no threshold problem
- Proxy
  - Core outcome
    - Efficiency
    - Substantial seller revenues

Concrete Example

90 MHz of 3G Spectrum

1710-1755, 2110-2155

Current approach: FCC sets band plan

Block	A	B	C	D	E
MHz	20	20	10	10	30
Licenses	176	6	6	734	6

- All frequency paired

Band plan fits best guess of what industry wants

Block	A	B	C	D	E
MHz	20	20	10	10	30
Licenses	176	6	6	734	6
Winner	Cingular	AT&T	T-Mobile	Sprint	Verizon

- Sources of competition eliminated
  - Unpaired or other different approaches
  - Size of blocks

Clock-proxy approach adds flexibility and simplicity

- 36 blocks of 2.5 MHz in each of 734 markets
- Bidders indicate number of blocks (paired/unpaired):
  - Nationwide (1)
  - Regional economic area group (6)
  - Economic area (176)
  - Cellular market area (734)
- Specific bands determined at end of auction to maximize fit (contiguous spectrum across frequency and geography)
- Note: need price adjustment model

Clock-Proxy Auction

- Simplicity (this can done!)
- Good starting point for two-sided auction